

ULK4 (MH-49): sc-135595

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. ULK4 (unc-51-like kinase 4) is a 1,275 amino acid protein that contains one protein kinase domain and one HEAT repeat and belongs to the Ser/Thr protein kinase family. Although containing what is thought to be a catalytically inactive domain, ULK4 may play a role in the ATP-dependent phosphorylation of target proteins. The gene encoding ULK4 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

- Bairoch, A. and Claverie, J.M. 1988. Sequence patterns in protein kinases. *Nature* 331: 22.
- Hanks, S.K., Quinn, A.M. and Hunter, T. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. *Science* 241: 42-52.
- Hanks, S.K. and Quinn, A.M. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. *Methods Enzymol.* 200: 38-62.
- Véron, M., Radzio-Andzelm, E., Tsigelny, I. and Taylor, S. 1994. Protein kinases share a common structural motif outside the conserved catalytic domain. *Cell. Mol. Biol.* 40: 587-596.
- Manning, G., Whyte, D.B., Martinez, R., Hunter, T. and Sudarsanam, S. 2002. The protein kinase complement of the human genome. *Science* 298: 1912-1934.

CHROMOSOMAL LOCATION

Genetic locus: ULK4 (human) mapping to 3p22.1.

SOURCE

ULK4 (MH-49) is a mouse monoclonal antibody raised against recombinant ULK4 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

ULK4 (MH-49) is recommended for detection of ULK4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ULK4 siRNA (h): sc-77914, ULK4 shRNA Plasmid (h): sc-77914-SH and ULK4 shRNA (h) Lentiviral Particles: sc-77914-V.

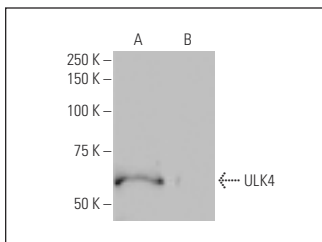
Molecular Weight of ULK4: 142 kDa.

Positive Controls: human ULK4 transfected 293T whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



ULK4 (MH-49): sc-135595. Western blot analysis of ULK4 expression in truncated human ULK4 transfected (A) and non-transfected (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.